

A NEW SPECIES OF *PROTEA* FROM THE SOUTH EASTERN CAPE

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ABSTRACT

A new species of dwarf *Protea*, *Protea intonsa* Rourke, is described.

UITTREKSEL

'N NUWE SOORT *PROTEA* VAN DIE SUID-OOS-KAAP.

'n Nuwe soort dwerg *Protea*, *Protea intonsa* Rourke, word beskryf.

INTRODUCTION

Several collections of a dwarf caespitose species of *Protea* from the mountains of the south eastern Cape have been made during the past 30 years. This material, deposited in a number of South African herbaria, could not be identified with any previously published description of *Protea*. A careful examination of the type material of all possible allied taxa confirmed the view that these collections represented a hitherto undescribed species.

Protea intonsa Rourke, sp. nov.

Haec species caespitosa, a foliis glabris acicularibus canaliculatis vel linearibus, 15-40 cm longis, 2-5 mm latis, et perianthio, glabro praeter perianthium limbum manifeste lanatum ad apicem, distinguitur.

Fruticulus nanus, caespitosus, 30-60 cm in diam., 15-40 cm altus. *Caules* breves, hypogaei. Ramuli caespites terminales foliorum ferentes. *Folia* acicularia canaliculata vel linearia, 15-40 cm longa, 2-5 mm lata, glabra, laevia vel leviter scabra. *Inflorescentiae* globosae cyathiformes, 2-5 cm in diam. *Receptaculum involucre* 1-2 cm in diam., planum. *Bractee* involucrales 4-5 seriatæ, minutæ et sparsæ sericeæ, glabrescentes. Series intima oblonga spathulata, 2-2,5 cm longa, 1 cm lata, apices rotundatos concavos. Series externa ovata obtusa, 1-1,5 cm lata. *Perianthium* 2,5-3 cm longum, glabrum praeter perianthium limbum, manifeste lanatum ad apicem. Perianthium limbi lineares, acuminati, glabri sed apices dense lanatos. Limbus medianus adaxialis brevior quam alteri. *Stylus* 2,5-3 cm longus, arcuatus adaxialis, contractus terminalis, leviter quadrangulatus compressus. *Stigma* peranguste lineare vel filiforme, 5-6 mm longum, compressum, longistrorsum sulcatum.

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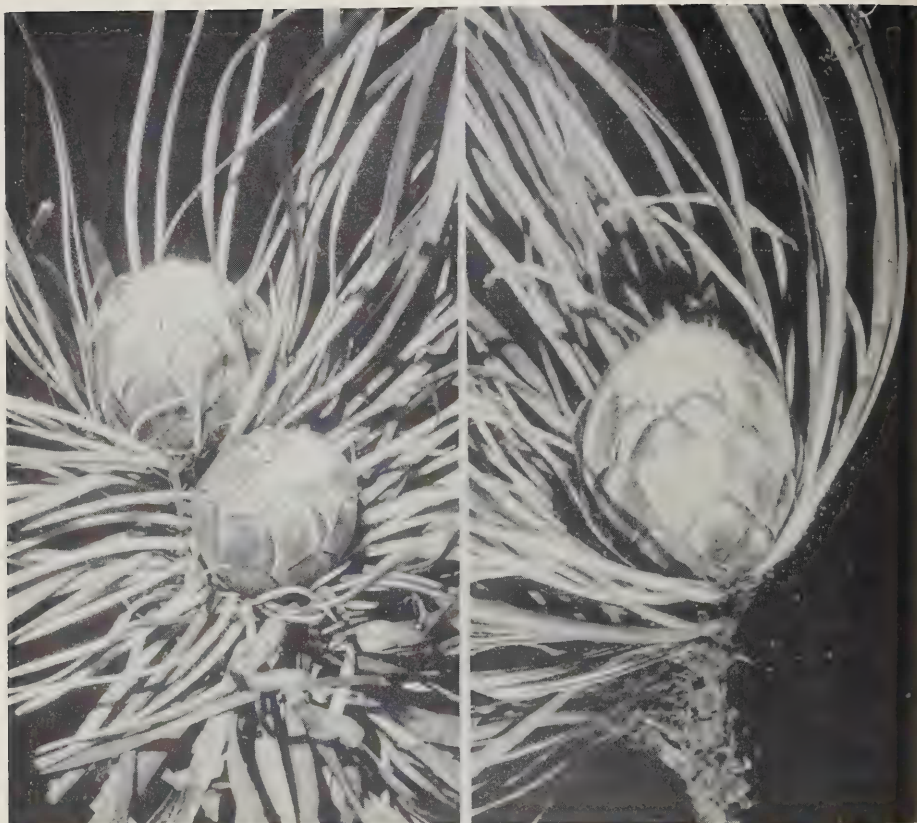


FIG. 1.

Protea intonsa showing the inflorescences at anthesis. Slightly less than life size. (Part of the type material, J. P. Rourke 860.)

A dwarf tufted shrublet forming clumps 30–60 cm in diam., 15–40 cm in height. *Branches* short, subterranean; terminal branchlets bearing tufts of leaves at or just above soil level. Subterranean branches bearing alternately arranged lanceolate to ovate scales. *Leaves* acicular canaliculate to linear, 15–40 cm long, 2–5 cm wide, glabrous except for a few slender trichomes in the petiolar region, occasionally slightly glaucous, smooth to slightly scabrous, apex acute to mucronate. *Inflorescences* globose cyathiform 2–5 cm in diam. *Involucral receptacle* 1–1.5 cm in diam., flat. *Involucral bracts* 4–5 seriate, the innermost

series oblong spatulate, 2–2.5 cm long, 1 cm wide, apices broadly obtuse, slightly concave; the outer series broadly ovate, 1–1.5 cm long, 1–1.5 cm wide; outer surface of bracts minutely and sparsely sericeous soon becoming glabrous, margins minutely ciliate; greenish, flushed with dull carmine becoming more uniformly carmine with age. *Perianth* 2.5–3 cm long, glabrous except for the densely lanate apices of the perianth limbs. Adaxial perianth sheath 4 mm wide proximally tapering to filiform below the perianth limbs, margins undulate and involute. Free perianth segment 1.5 mm wide proximally, tapering to filiform below the limb. *Perianth limbs* linear acuminate, 7–9 mm long glabrous for greater part of their length except for the densely lanate apices; median adaxial limb shorter than the rest. *Anthers* 4–5 mm long, linear, terminated by an ovoid to saggitate apical boss. *Style* adaxially arcuate, 2.5–3 cm long, tapering subterminally, slightly quadrangular, compressed, glabrous. *Pollen presenter* narrowly linear to filiform, flattened, 5–6 mm long, longitudinally grooved, apex rounded. *Hypogynous scales* ovate acute to irregularly oblong, retuse to bifid, 1.5 mm long, 1 mm wide.

Diagnostic Characters: *Protea intonsa* is distinguished by its compact caespitose growth habit, its long, glabrous, acicular canaliculate to linear leaves, 15–40 cm long, 2–5 cm wide, and the perianth, completely glabrous except for the thickly lanate apices of the perianth limbs. In the young inflorescence just before anthesis, the prominent white beard which projects a distance of up to 7 mm from the innermost series of involucre bracts, is a very marked distinguishing character.

The overall morphological features of *P. intonsa* suggest an affinity with *P. montana* E. Mey. ex Meisn. Both species have been observed growing sympatrically on Mannetjesberg in the Uniondale district but no evidence of hybridization was found.

Type Material: Uniondale district, Mannetjesberg, south slopes, 18/9/1967, J. P. Rourke 860, holotype NBG, isotypes PRE, STE.

Specimens Examined:

CAPE PROVINCE—3322 (Oudtshoorn): Blesberg, Swartberg Range, north slopes, (-BC), 17/10/1955, Esterhuysen 24927 (BOL); Mannetjesberg, south slopes, (-DB), 18/9/1967, Rourke 860 (NBG, PRE, STE); Mannetjesberg, south east ridge, 19/9/1954, H. C. Taylor 1471 (NBG).

—3323 (Willowmore): Anthoniesberg, south slopes, (-AD), 19/10/1955, Esterhuysen 24936 (BOL); Slopsteenberg, south slopes, (-AD), 3/11/1941, Esterhuysen 6350 (BOL).

—3324 (Steytlerville): On south facing ridge of Scholtzberg, sloping towards Baviaanskloof, (-CB), 2/9/1962, B. P. Loots s.n. (PRE); Scholtzberg, Baviaanskloof mountains, south slopes of lowest ridge peak, 24/9/1953, H. C. Taylor 950 (NBG).

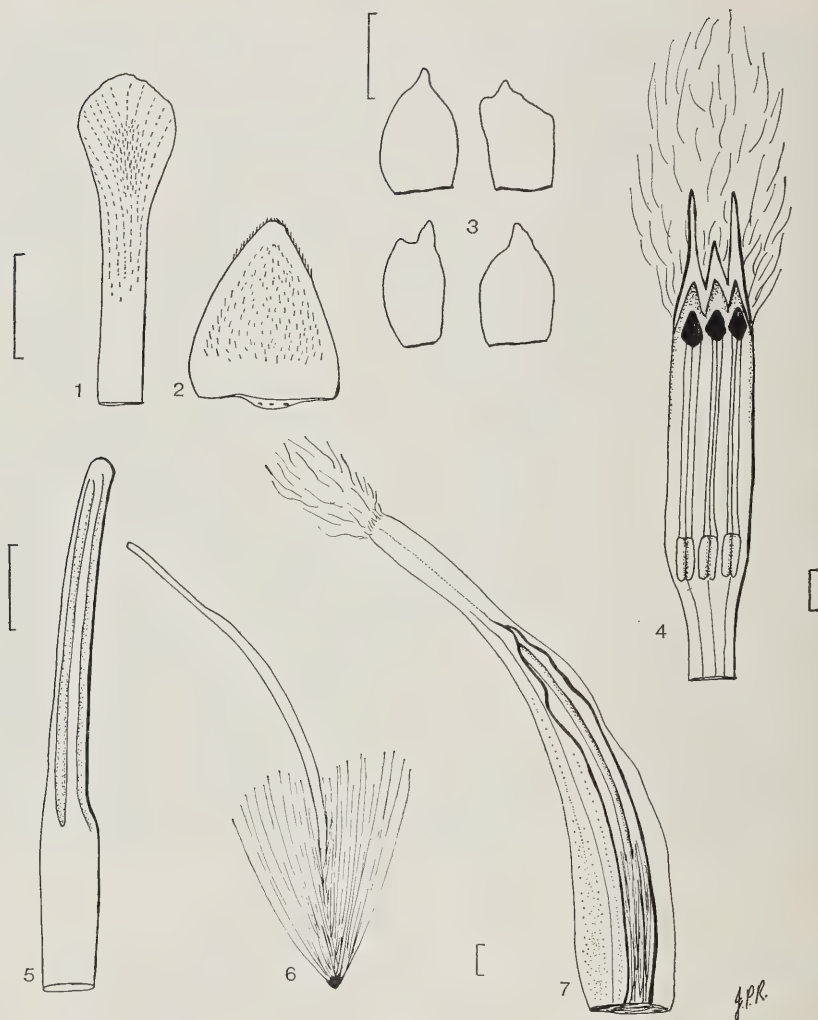


FIG. 2.

Diagrams of the floral parts of *Protea intonsa*. (1) Involucral bract of the innermost series; (2) involucral bract of the outer series; (3) hypogynous scales showing their irregular form; (4) adaxial perianth limbs showing the anthers, the shorter median adaxial perianth limb and the lanate apices of the perianth limbs; (5) pollen presenter; (6) gynoecium; (7) perianth before anthesis showing the lanate apices of the perianth limbs. The scale lines represent 1 mm.



FIG. 3.
Distribution range of *Protea intonsa*.

DISCUSSION

Protea intonsa appears to be confined to a few high peaks on the inland mountain ranges of the south eastern Cape. The most westerly records are from Blesberg on the Swartberg range and the most easterly are from Scholtzberg, at the eastern end of the Baviaanskloof mountains. Populations have been observed at several localities in the Kammanassie mountains where it is fairly abundant locally. To date, this species has only been recorded at elevations of 1 000–1 500 m above sea level. *P. intonsa* thrives in hot, dry, exposed habitats, on rocky slopes of Table Mountain Sandstone in either north or south facing situations, where the mean annual rainfall is 250–375 mm p.a. (± 10 –15").

The mature plants are very fire resistant. New shoots regenerate from the subterranean stems within a few months after the aerial stems have been burnt off. Flowering commences in September and continues until November. On opening, the involucral bracts are greenish tinged with carmine but as the inflorescence ages the bracts become more uniformly flushed with dull carmine. During November 1970 several populations in the Kammanassie mountains were studied but in all the specimens inspected it was found that the developing inflorescences had reached a diameter of about 1 cm and then aborted. Inflorescence development was probably arrested as a result of the prolonged drought of 1969–1970, which was one of the most severe droughts experienced in the Cape for several decades.